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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,713	11/14/2003	Gil H. Choi	PB515PIC1	9281

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EXAMINER

GRASER, JENNIFER E

ART UNIT PAPER NUMBER

1645

DATE MAILED: 06/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,713

Applicant(s)

CHOI, GIL H.

Examiner

Jennifer E. Graser

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-41 is/are pending in the application.
- 4a) Of the above claim(s) 40 and 41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 22-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/084,205.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/3/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-8, now canceled, and corresponding to new claims 22-39, in the reply filed on 5/14/04 is acknowledged. The traversal is on the ground(s) that it would not place an undue burden on the Examiner to search all of the claims together. It is further argued that the search for the proteins and/or antibodies would reveal the isolated polynucleotides. This is not found persuasive because Groups I, II and III are drawn to three biologically, chemically, and structurally different products and contrary to Applicants arguments a search for the claimed isolated polynucleotides does not require a search for the polypeptides they encode or antibodies directed to said polypeptides. The literature search for polynucleotides most often does not reveal publications including all three products and would not be expected to be coextensive. New claims 40 and 41 are drawn to a method of detecting Staphylococcus nucleic acids through hybridization and have been placed in original Group VI and are hereby withdrawn because they are drawn to a non-elected invention.

The requirement is still deemed proper and is therefore made **FINAL**. Claims 22-39 are currently under examination.

Specification

2. The current status of all nonprovisional parent applications referenced should be updated in the first line of the specification. For instance, Application Number 10/084,205 is now abandoned.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 26 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26 is rejected under 35 U.S.C. 101 because it reads on a product of nature which is non-statutory subject matter. The claim should indicate that the nucleic acid is "isolated". Additionally, the word "fully" should be inserted before the word "complementary" because a 'complement' can read on as little as a single nucleotide.

Claim 26 is rejected under 35 U.S.C. 101 because it reads on a product of nature which is non-statutory subject matter. The claim should indicate that the nucleic acid is "isolated". Additionally, the word "fully" should be inserted before the word "complementary" because a 'complement' can read on as little as a single nucleotide.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 31-33, 35 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Lowe (DNA Seq. 10(1). 19-23, 1999, corresponding to Genbank Accession #: AF034076).

Lowe teaches an isolated nucleic acid which is identical to has a local similarity of 99.5% and a query match of 98.8% to Applicant's SEQ ID NO:1. The nucleotide sequence is taught to be the MurC gene from *S.aureus*. Applicants' SEQ ID NO:1 is also the MurC gene from *S.aureus*. The vector of claims 36 only requires the isolated nucleic acid recited in claim 31, i.e., an isolated nucleic acid comprising at least 50 contiguous nucleic acids of SEQ ID NO:1, or encoding SEQ ID NO:2. See attached sequence alignment.

7. Claims 31-33, 35 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Lowe (Submitted. Nov. 11, 1997. Genbank Accession #: AF034076).

Lowe teaches an isolated nucleic acid which is identical to polynucleotides 1-1199 of SEQ ID NO:1. This sequence has a local similarity of 99.7% and a query match of 75.5%. The nucleotide sequence is taught to be the MurC gene from *S.aureus*. Applicants' SEQ ID NO:1 is also the MurC gene from *S.aureus*. The vector of claims 36 only requires the isolated nucleic acid recited in claim 31, i.e., an isolated nucleic acid comprising at least 50 contiguous nucleic acids of SEQ ID NO:1, or encoding SEQ ID NO:2. See attached sequence alignment.

8. Claims 31-33, 35 and 36 are rejected under 35 U.S.C. 102(a) as being anticipated by Nicola et al (Genbank Accession #: E35613, August 24, 1999).

Nicola et al teaches an isolated nucleic acid which has a local similarity of 99.6% and a query match of 98.1% to Applicant's SEQ ID NO:1. The nucleotide sequence is taught to be the MurC gene from *S.aureus*. Applicants' SEQ ID NO:1 is also the MurC gene from *S.aureus*. The vector of claims 36 only requires the isolated nucleic acid recited in claim 31, i.e., an isolated nucleic acid comprising at least 50 contiguous nucleic acids of SEQ ID NO:1, or encoding SEQ ID NO:2. See attached sequence alignment.

9. Claims 31-39 are rejected under 35 U.S.C. 102(a) as being anticipated by Wallis et al.(Genbank Accession #: AAV99650, corresponding to patent EP889123).

Wallis et al teaches an isolated nucleic acid which has a local similarity of 99.6% and a query match of 98.1% to Applicant's SEQ ID NO:1. The nucleotide sequence is taught to be the MurC gene from *S.aureus*. Applicants' SEQ ID NO:1 is also the MurC gene from *S.aureus*. Host cells comprising the nucleotide sequence are taught, as well as expression vectors comprising said nucleotide sequence. The vector of claims 36 only requires the isolated nucleic acid recited in claim 31, i.e., an isolated nucleic acid comprising at least 50 contiguous nucleic acids of SEQ ID NO:1, or encoding SEQ ID NO:2. See attached sequence alignment.

10. Claims 31-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Kunsch et al. (US 6,593,114 B1).

Kunsch et al teach an isolated nucleic acid which has a local similarity of 100% and a query match of 99.7% to Applicant's SEQ ID NO:1. Host cells comprising the nucleotide sequence are taught, as well as expression vectors comprising said

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nucleotide sequence. The vector of claims 36 only requires the isolated nucleic acid recited in claim 31, i.e., an isolated nucleic acid comprising at least 50 contiguous nucleic acids of SEQ ID NO:1, or encoding SEQ ID NO:2. See attached sequence alignment.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 22-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Nicola et al, Wallis et al, Lowe et al (DNA Seq. 10(1) or Submitted 1997) or Kunsch.

Nicola, Wallis and Lowe teach the isolated *S.aureus* murC gene which encodes the murC protein essential for cell wall biosynthesis. Kunsch does not specifically recite that the protein is the "murC" gene, but does identify the polynucleotide as encoding an essential protein. The isolated polynucleotides disclosed by the prior art references are up to 99.7% identical to Applicant's SEQ ID NO:1. These polynucleotides appear to be obvious or analogous variants of the claimed nucleic acid sequences because they appear to possess the same or similar functional characteristics (i.e., encode the murC protein from *S.aureus*). The slight differences in nucleotide sequence due to obvious

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conservative substitutions which do not change the functionality of the nucleotide sequence.

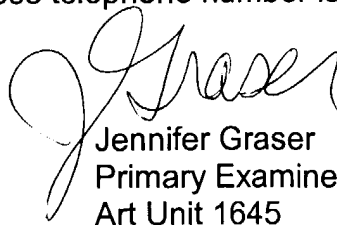
Since the Patent Office does not have the facilities for examining and comparing Applicant's murC gene with the murC gene of the prior art, the burden of proof is upon applicants to show an unobvious distinction between the material structural and functional characteristics of the claimed polynucleotides and the polynucleotides of the prior art. See In re Best, 195 USPQ 430, 433 (CCPA 19&&).

13. Correspondence regarding this application should be directed to Group Art Unit 1645. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Remsen. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Group 1645 Fax number is (703) 872-9306 which is able to receive transmissions 24 hours/day, 7 days/week.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer E. Graser whose telephone number is (571) 272-0858. The examiner can normally be reached on Monday-Friday from 7:00 AM-4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith, can be reached on (571) 272-0864.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-0500.


Jennifer Graser
Primary Examiner
Art Unit 1645
6/21/04